COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
THIRD SET OF INFORMATION REQUESTS FROM UWUA LOCAL 273
D. T. E. 05-27

Date: July 9, 2005

Responsible: Stephen H. Bryant, President

BULK RESPONSE

UWUA-3-4 [Bryant, p. 9] Please provide a copy of DPU 92-111 and DTE 98-31.

Response: Attachment UWUA-03-04 (a) is a copy of the Department's Order in DPU-92-111.

Attachment UWUA-03-04 (b) is a copy of the Department's Order in DTE-98-31.

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES

October 30, 1992

D.P.U. 92-111

Investigation by the Department on its own motion as to the propriety of the rates and charges set forth in the following tariffs: M.D.P.U. Nos. 241 through 251 and M.D.P.U. No. 177, Page 10, filed with the Department on April 16, 1992 to become effective May 1, 1992 by Bay State Gas Company.

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TABLE OF CONTENTS

I. INTRODUCTION

On April 16, 1992, Bay State Gas Company ("Bay State" or "Company") filed with the Department of Public Utilities ("Department") tariff schedules of proposed rates and charges designed to increase the Company's annual retail gas revenues by $20,646,572 or 7.0 percent, based on a test year ending December 31, 1991. The Company subsequently amended its filing to reflect certain updates, bringing the proposed rate increase to $21,169,471 or 7.2 percent over the Company's test year revenues (Exh. BSG-3, Sch. 3-2, Revised). By Order dated April 21, 1992, the Department suspended the effective date of the proposed tariffs until October 31, 1992, in order to examine the propriety of the rates and charges sought by the Company.

Bay State supplies gas service to approximately 235,000 customers in 57 communities in service areas surrounding Springfield, Brockton, and Lawrence, Massachusetts. Bay State also supplies gas at wholesale to utility customers in Massachusetts and neighboring states. The Company's wholly-owned subsidiary, Northern Utilities, Inc. ("Northern"), distributes natural gas to retail customers in portions of Maine and New Hampshire. Granite State Gas Transmission, Inc. ("Granite State"), another subsidiary of Bay State, owns and operates interstate gas pipelines in New England.

The Department last granted Bay State a rate increases of $12,483,245, and $5,539,000, respectively, pursuant to the terms

of settlement agreements filed by the parties to Bay State Gas Company, D.P.U. 89-81 (1989) and Bay State Gas Company, D.P.U. 1535 (1983). In its last fully litigated rate case, Bay State Gas Company, D.P.U. 1122 (1982), Bay State was granted an increase of $2,160,847

Pursuant to notice duly issued, three public hearings were held in the Company's service territory, on June 2, June 3 and June 16, 1992, in Lawrence, Springfield, and Brockton, respectively, in order to afford interested persons an opportunity to comment on the proposed rates. Eighteen days of evidentiary hearings were held at the Department's offices between June 23 and August 7, 1992. Pursuant to G.L. c. 12, § 11E, the Attorney General of the Commonwealth ("Attorney General") filed a notice of intervention in the proceeding. In addition, the Division of Energy Resources of the Commonwealth of Massachusetts ("DOER") and Distrigas of Massachusetts Corporation[1] ("DOMAC") sought and were granted intervenor status in the proceeding. Boston Gas Company ("Boston Gas") and Berkshire Gas Company ("Berkshire") filed petitions for intervention and were granted limited participant status in the proceeding.

In support of its filing, the Company presented the

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[1] Although DOMAC's petition for intervention was granted, DOMAC did not conduct discovery, participate in evidentiary hearings or file a brief.

testimony of 10 witnesses: Thomas W. Sherman, executive vice president, chief financial officer, director, and a member of Bay State's senior officer group; David A. Deans, director of revenue requirements; Joseph A. Almeida, senior revenue requirements analyst; Joseph A. Ferro, manager of rates and gas costing; Earl M. Robinson, President of Weber, Fick and Wilson, Division of AUS Consultants - Utility Services Group; James D. Simpson, director of rates and economic analysis; James L. Harrison, vice president of Management Applications Consulting, Inc.; Paul R. Moul, senior vice president, AUS Consultants - Utility Services Group; Paul LaShoto, director of operations; and Candace M. Block, vice president of Towers Perrin. Bay State entered 28 exhibits, the Attorney General entered 264 exhibits, DOER entered 64 exhibits, and the Department entered 130 exhibits into the record. Initial and reply briefs were filed by the Company, the Attorney General, and DOER. Berkshire and Boston Gas filed initial briefs only.

II. LEGAL STANDARDS: NOTICE OF ISSUES

A Positions of the Parties

1. The Company

On brief, Bay State states that many of the arguments briefed by the Attorney General were not addressed during hearings, and consequently the Company has been deprived of a full opportunity to respond to these issues (Company Brief, p. 4). Bay State acknowledges that in requesting a rate increase, the Company bears the burden of establishing a prima facie case that it is entitled to the relief sought (id., p. 6). Bay State argues, however, that while the Company is on notice generally that all aspects of a utility's operations are subject to review during a general rate proceeding, the Company is entitled to adequate notice of issues and an opportunity to rebut challenges to its case prior to the close of the record (id., pp. 6-7).

Citing Department precedent, Bay State alleges that when an intervenor first addresses an issue on brief, that party bears a heavy burden to demonstrate that the record evidence clearly supports its position (id., p. 6, citing Western Massachusetts Electric Company, D.P.U. 88-250, p. 52 (1988); Company Reply Brief, p. 5). Bay State thus argues that the Department should accord little, if any, evidentiary weight to issues raised by the

Attorney General for the first time on brief[2] (Company Brief, pp. 7-8; Company Reply Brief, p. 6), and concludes that the Attorney General has failed to meet his burden of rebutting the Company's prima facie case (Company Brief, p. 11).

2. The Attorney General

As an initial matter, the Attorney General responds to Company's arguments by noting that, in the past, the Department has found that the filing of a general rate case places a company on notice that every element of the rate request is at issue (Attorney General Reply Brief, p. 2, citing Bay State Gas Company, D.P.U. 1535, pp. 14-17 (1983) According to the Attorney General, notice has also been provided where a party "has questioned witnesses or marked information responses as evidence regarding an issue..." (id., p. 3, citing New England Telephone Company, D.P.U. 86-33-D, p. 9 (1987)). The Attorney General asserts that "no useful purpose would be served by requiring parties to repeat on cross examination questions which the response is already provided in an exhibit" (id., n.3). Accordingly, the Attorney General argues that he has met his burden of proof in demonstrating that the Company's requested increase is unwarranted (id., p. 4)

B. Analysis and Findings

General Laws c. 30A, § 11(1) provides that "[p]arties shall

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[2] We note that briefs have no evidentiary value; they are legal arguments based on the facts (which are evidence) developed through the hearing process.

have sufficient notice of the issues involved [in an adjudicatory proceeding] to afford them reasonable opportunity to prepare and present evidence and argument." The Department has articulated what constitutes "sufficient notice of the issues" in Bay State Gas Company, D.P.U. 1535-A, p. 17 (1983): a party requesting a general rate increase is on notice that all aspects of its filing are at issue. Additionally, the Department has held that the obligation to provide notice has been fulfilled where the existence of specific topics for inquiry have been noted in a previous Order; where a witness has been questioned on a particular topic; where an information request has been marked as evidence regarding an issue; or where a company has been asked to provide a witness to address a certain topic. New England Telephone and Telegraph Company, D.P.U. 86-33-D, p. 9 (1987).

In the instant case Bay State had sufficient notice that any aspect of its filing was subject to possible inquiry and challenge. Bay State Gas Company, supra. Moreover, in this case, the Attorney General marked the Company's responses to information requests as exhibits under the New England Telephone and Telegraph, supra, standard. Thus, Bay State had sufficient notice of all issues addressed in the Attorney General's brief.[3]

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[3] Of course, as in all adjudicatory proceedings, the Department may only rely on substantial evidence; that is, such evidence as a reasonable mind might accept as adequate to support a conclusion. G.L. c. 30A, §§ 1(6), 14(e). Therefore, in order for a party to prevail on an issue, regardless of who the issue may have been spotlighted, that position must be supported by the record.

STEP ADJUSTMENT MECHANISM

In the course of the proceeding, the Company proposed a base-rate step adjustment mechanism (Tr. XVIII, pp. 52-54; DPU-108; RR-DPU-54). Under its proposal, the Company would increase its base rates annually to recover carrying costs and depreciation on non-revenue producing investments[4] made after the end of the test year based on the depreciation rates and cost of capital determined by the Department in the instant proceeding (id. The Company states that any step increase resulting from this mechanism would be audited by the Department each year before going into effect and could be suspended if, at that time, (1) current returns exceeded the allowed return, or (2) if the Department desired to commence a full-scale rate investigation for any reason (Tr. XVIII, p. 53; DPU-RR-54). Pursuant to its proposed mechanism, the Company calculated its total step adjustment revenue requirement for the post test year period January 1992 through September 1993 to be $4,423,974 (Exh. DPU-108)

As a practical matter, we believe that the less focussed the information request (the response to which is marked as an exhibit), the less likely it will be that the record would contain substantial evidence to support the argument.

[4] These non-revenue producing investments consist of replacement mains, replacement services, cathodic protection, joint clamping, meters, measuring and regulator stations, etc. (RR-DPU-54).

A. Positions of the Parties

1. The Company

The Company contends that an annual step adjustment would stabilize its earnings and provide benefits to ratepayers by (1 providing the Company with an incentive to make installations and improvements to its distribution system in order to meet safety requirements and (2) allowing the Company to file fewer requests to increase base rates (Company Brief, p. 19). The Company contends that the carrying costs of non-revenue producing capital expenditures represent a major cause of deteriorated earnings between rate cases and account for approximately $6 million of the $20.7 million rate increase initially requested in this proceeding (id.).

The Company asserts that its step adjustment proposal is an innovative ratemaking approach that is consistent with Department precedent (Company Reply Brief, p. 9). The Company further asserts that a review of any step adjustments would allow for a more focused review of issues which cause earnings erosion, while containing regulatory costs and avoiding additional base rate cases (id.).

2. The Attorney General

The Attorney General opposes Bay State's proposal on three grounds. First, the Attorney General asserts that the Company seeks to stabilize its revenues without a corresponding adj.. cment to the allowed rate of return (Attorney General Reply

Brief, pp. 4-5). Second, according to the Attorney General, step adjustment would modify one of the Department's fundamental ratemaking principles by allowing for single-issue rate proceedings (id.). Third, the Attorney General contends that Company made this proposal on the last day of hearings, on redirect examination. The Attorney General asserts that the intervenors have thus been deprived of due process rights because they were not afforded the opportunity to issue discovery and conduct meaningful cross-examination on the Company's proposal (id., p. 5).

B. Analysis and Findings

Pursuant to G.L. c. 164, § 94, the Department is charged with the responsibility of investigating the propriety of proposed rate changes filed by a company. In fulfilling its statutory obligation, the Department has enunciated some guiding principles. The Department has held that a request for an increase in a Company's revenue requirement will be considered only in the context of a general rate proceeding. Eastern Edison Company, D.P.U. 1580, pp. 13-14 (1984); New England Telephone Company, D.P.U. 84-238 (1985); New England Telephone, D.P.U. 84-267 (1985). The Department conducts such rate investigations, based on a historical test year, to determine the relationship between a company's operating expenses, rate base, return allowance, and revenues over the period rates are expected to remain in effect. The results of this analysis are then used

by the Department to establish specific rates for the company's various services.

The Company's proposed base-rate step adjustment mechanism would require a departure from this precedent, and, based on this record, we cannot find that such a departure is warranted or in the public interest. Additionally, we share the Attorney General's concerns regarding the introduction of this proposal so late in the proceeding. A proposal of this magnitude requires full investigation. Finally, the Department is particularly concerned by the Company's assertion that annual step adjustments would provide an incentive to make improvements to its distribution system in order to meet safety requirements. A Company's obligation to fulfill safety requirements is absolute and should not be affected by ratemaking treatment. Accordingly, Bay State's request for approval of its base-rate step adjustment in this proceeding is denied.

COMPRESSED NATURAL GAS EXPENSES

A. The Company's Proposal

Compressed Natural Gas ("CNG") is natural gas in a form which can be used as a vehicle fuel in place of gasoline or diesel (Exh. BSG-7, p. 4). According to the Company, there is considerable interest in CNG-fired vehicles at this time for three reasons: (1) they produce significantly less air pollution compared to traditional gasoline- and diesel-powered vehicles; it is relatively simple and inexpensive to convert gasoline- and diesel-powered vehicles to run on CNG; and (3) natural gas is available domestically in abundant supplies (id., p. 4).

Bay State has undertaken two efforts to encourage the development of CNG as a viable alternative to gasoline: (1) a Company CNG experiment; and (2) a public CNG experiment (id., p. 6). For the Company experiment, Bay State converted a portion of its vehicle fleet from gasoline to CNG, and constructed two company-dedicated CNG filling stations at its Brockton and Springfield facilities to service the converted vehicles (id., pp. 6-9). The Company spent $197,423 to convert 80 of its vehicles to CNG between 1985 and 1991 (Exh. DPU-75). In addition, the Company spent $118,626 constructing the Springfield filling station and $138,790 constructing the Brockton filling station (Exhs. DPU-74, DPU-77).

For the public experiment, the Company constructed a separate CNG filling station in 1991 at its Springfield facility

that is open to the public (Exh. BSG-7, p. 7). This public CNG filling station was constructed at a cost of $99,658 (id., p. 8; Exh. DPU-76). The Company began a "demonstration phase" to provide CNG to private vehicles, and the Company has sold CNG to twelve privately-owned vehicles under its low annual use C&I rate (G-30) (Exh. BSG-7, p. 10). However, the Company stated that for CNG to be considered by fleet operators, it is important to make CNG service economically attractive (id., p. 9). Thus, the Company is proposing in this case to offer a special CNG rate which is more reflective of market conditions (id., p. 10). This rate would be set at $0.30 per therm less than the equivalent price per gallon of gasoline, and would be offered to no more than 100 vehicles (id., p.

The Company testified that its internal CNG experiment has operated at a deficit (Tr. XV, pp. 69-70). This conclusion was based on a comparison of the total costs associated with constructing and operating the CNG plant, and the cost differential between CNG and gasoline (id.) The Company stated, however, that as the program is expanded and more Company vehicles are converted, the CNG experiment would probably provide a net benefit to ratepayers (id., p. 71).

The Company determined that, based on the test year billing determinants for CNG usage, its proposed CNG rate would not recover the full costs associated with providing service to CNG customers (RR-DPU-42). The Company has proposed to allocate the

resulting $3,240 subsidy to its other ratepayers (Exh. BSG-7, BSG 7-16, p. 2).

The Company has included all of its CNG-related costs in its year cost of service. The Company included in its rate base $418,121[5] associated with company-dedicated CNG-related utility plant, and $99,658 associated with the public filling station plant for a total net rate base addition of $517,779 (RR-DPU-46). Company thus included the return and taxes associated with this level of rate base in its cost of service. The Company also incurred a test-year depreciation expense of $23,955 for the Company-dedicated plant and $1,600 for the public station (id.; DPU-76)

During the test year the Company incurred $19,150 in O&M costs (including electricity costs) associated with maintaining two Company-dedicated filling stations (Exhs. DPU-74, DPU-77; RR-DPU-46). In addition, the Company spent $13,075 in the test year on CNG volumes to fuel its converted fleet (RR-DPU-46). The Company also incurred $1,450 in the test year for O&M associated with the operation of the public CNG station (Exh. DPU-76).

B. Positions of the Parties

1. The DOER

Although it did not specifically address the appropriateness of a generic proceeding on the issue, DOER stated that, while it

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5 The Company adjusted the total CNG-related plant of $454,840 for a reserve for depreciation of $39,700 and then added $2,981 for a working capital allowance (RR-DPU-46, p. 3).

does not support a prolonged or heavily subsidized CNG rate, it does support the Company's proposal to depart from the Department's general ratemaking principles in this instance (DOER Brief, pp. 15-16). DOER states that this support is dependent upon the specific limitations included in Bay State's proposal and that, after a "brief development phase," the rate should no longer require subsidization (id., p. 17). Finally, DOER urges the Department to exclude from applicability of the CNG rate special contracts between Bay State and fleet operators who have constructed their own filling stations (id.).

2. The Company

In response to a briefing question from the Department, the Company addressed the appropriateness of conducting a generic investigation into CNG issues. Bay State asserted that a generic proceeding on CNG issues is not needed at this time, given the limited scope of CNG vehicle programs and the possibility that utilities may learn from each other's efforts in the area (Company Brief, p. 211). The Company also states that a "non-decision" in the instant case regarding subsidization by other ratepayers would put the Company at risk financially and cause it to rethink its CNG plans (id., pp. 211-212).

Bay State proposes that it be allowed to offer the proposed CNG rate subject to the 100 vehicle limit (id., p. 212). The Company also proposes that it be allowed to represent to customers that the rate will not be substantially affected by

regulatory action in the next two years (id.

In addition, the Company requests that the Department not order any special accounting treatment for CNG-related revenues, plant, and expenses, i.e., deferral of costs and revenues until completion of a generic proceeding (id.) The Company asserts that the magnitude of costs and number of customers is small, and there is thus little harm in allowing the Company to continue with its CNG service (id.)

C. Analysis and Findings

The Department recognizes that the Company's CNG proposal is an effort to respond to new market opportunities, and we encourage such actions. However, because the Company is asking its ratepayers to subsidize both the Company CNG experiment and the public CNG experiment, the Department concludes that an analysis of the policy implications of CNG use and promotion must be made prior to our allowing the Company to include any CNG-related costs in its cost of service. Although we recognize that the costs and revenues associated with a CNG program are small at this time, the Department concludes that the policy issues surrounding CNG should be analyzed prior to the incurrence of any larger sums. In addition, once the major policy issues regarding CNG are addressed in a generic, the Company can proceed with a CNG program with little or no future regulatory risk.

Therefore, the Department finds that it is appropriate to discuss the role that local distribution companies and their firm

ratepayers should play in the development of the CNG market in the recently opened CNG Generic, D.P.U. 92-230.

As a result, the Department will not make any findings regarding the Company's proposed CNG rate in this case, and we will defer inclusion of all CNG-related revenues and expenses until the conclusion of D.P.U. 92-230.[6] The Department thus directs the Company to make the following adjustments to its test year cost of service: (1) remove $517,779 from ratebase; (2) remove $25,555 in depreciation expense; (3) make the appropriate reductions to its return on ratebase and taxes, based on the Department approved rate of return as discussed in Section VII, below; 4) remove $20,600 in O&M expense; (5) remove $13,075 of CNG purchases for Company use; and (6) add $27,606 for gasoline costs.[7] All of the above items which have been removed from cost of service should be placed in a deferred account, with carrying costs, for consideration at the time of the Company's

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[6] The Department notes that, in the interim, the Company may sell CNG to CNG customers under either the new G-30 rate or the proposed CNG Rate, but we will not address the recovery of any resulting subsidy until after the completion of D.P.U. 92-230.

[7] The Company stated that using CNG in its vehicles rather than gasoline resulted in a cost savings (RR-DPU-49). The Company stated that the annualized CNG costs for its fleet, assuming it served the test-year-end number of converted vehicles, would have been $26,666 (id.). The Company further stated that the equivalent cost to fuel this same number of vehicles with gasoline would have been $56,301 (id.). Based on the ratio of these figures, the Department calculates that the Company's actual test year expense for CNG of $13,075 would have translated to a test year gasoline expense of $27,606.

next rate case (and after conclusion of the CNG Generic case). Lastly, the Company shall remove the $3,240 CNG revenue shortfall it had proposed to allocate to other ratepayers in its allocated cost of service study.

V. WEATHER STABILIZATION ADJUSTMENT

A. The Company's Proposal

The Company proposed a weather stabilization adjustment ("WSA") designed to minimize earnings fluctuations caused by abnormal weather (Exh. BSG-5, p. 45).

The Company stated that warmer than normal weather can have a substantial impact on earned returns, earnings per share, and cash flow, as evidenced by its experience during the test year, 1991 (Exh. BSG-1, p. 8). The Company stated that this short-term phenomenon has been substantially aggravated by the seasonal rate design adopted in D.P.U. 89-81, which concentrates over 75 percent of non-gas revenues into the winter months and makes net revenues much more weather sensitive (id.). The Company added that because fixed operating costs are not recovered through demand charges, or through prices of non-weather-sensitive headblocks of a rate structure, volatile weather can affect both the Company and its ratepayers (Exh. BSG-5, p. 46).

The Company asserted that a stable and growing dividend record is crucial for attracting equity investors (Exh. BSG-1, p. 8). The Company argued that since its dividend policy is influenced by the Company's earning record, stability of dividends is dependent on stability of earnings (id.) The Company asserted that its proposed WSA will stabilize earnings, without allowing the company to experience windfall profits during abnormally cold periods, thus protecting ratepayers (id.

The Company noted that colder than normal weather could to excess earnings which would be unfair to customers, while warmer than normal weather usually leads to lower gas sales and thus deficient revenues for the Company (Exh. BSG-5, p. 46). Company asserted that at least in the short term, earnings instability can result because earnings during the cold years rarely offset poor earnings during the warm years (id.) The Company concluded that a WSA would provide an effective method of stabilizing revenues to match fixed costs and would enable the Company to charge customers for services provided (id.

The Company noted that at least 10 utilities throughout the United States have implemented some form of weather-related revenue stabilization mechanism (id.).[8] The Company stated that, in addition, five natural gas distribution companies operating in California use a supply adjustment mechanism which includes a provision to adjust for deviations in revenues resulting from abnormal weather (id., p. 47).

In the fall of 1991, the Company performed regression analyses using annual degree day data from 1966-1991 (RR-DPU-6).[9]

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[8] The Company listed Alabama Gas Company, Atlanta Gas Light Company, Brooklyn Union Gas Company, Chattanooga Gas Company, Consolidated Edison Company, Elizabethtown Gas Company, Lone Star Gas Company, National Fuel Gas Company (New York), Piedmont Natural Gas Company (North Carolina and Tennessee); United Cities Gas Company (Georgia and Tennessee) (Exh. BSG-5, p. 46).

[9] The Company also provided the results of regression analyses using monthly data for the same 1966-1991 period indicating warming trends for some months and for some weather station

The Company stated that its regression analyses indicate that four out of the seven weather station sites at which the Weather Services Corporation ("WSC") collects data for Bay State show that there is a greater than 95 percent chance of a warming trend in the weather. Of these four weather station sites, the Company noted that three are coastal sites (id.).[10]

The Company asserted that the warming trend in the weather was not a reason for the Company's decision to file its proposed WSA (Tr. XII, pp. 56-57).[11] The Company stated that irrespective of the recent or current weather conditions, the Company would still have filed its WSA proposal (id.).

The Company added that if there were in fact a warming trend, which was not recognized in the calculation of the WSA revenue adjustment, then a departure from normal degree days during the rate year would understate the WSA revenue adjustment

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sites (RR-DPU-37).

[10] The four weather station sites are: Lawrence, Massachusetts; Portland, Maine; Portsmouth, New Hampshire; and Providence, Rhode Island. The Company stated that the Portsmouth weather data showed the strongest statistical result, indicating a less than 0.001 percent chance of no warming trend (RR-DPU-6).

The September 1991 issue of the Merrill Lynch's Natural Gas Distribution Quarterly indicated that: "Brooklyn Union Gas was the first gas distributor to implement a weather normalization clause in the early 1980s. Imitation by other companies has been very slow. However, because six out of the last nine heating seasons have been substantially warmer-than-normal, weather normalization clauses have been gaining acceptance" (Exh. DPU-44, Attachment DPU 2-52-F, p. 1).

when the weather is colder than normal and overstate the adjustment when the weather is warmer than normal (Tr. XII, pp. 64-65). The Company argued, however, that if it were to weather-normalize test year data based on a lower level of effective degree days, this would lower its warmer-than-normal weather normalization adjustment, resulting in lower test year billing determinants and correspondingly higher base rates to recover the Company's revenue requirement (Tr. XVIII, p. 9). The Company argued that only under these circumstances would it be appropriate and equitable to base the Company's WSA on warmer than normal weather or a lower level of effective degree days (id.

The Company stated that the financial community's evaluation of Bay State would be positively influenced by the implementation of the WSA (Exh. BSG-22). The Company indicated that Standard & Poor's ("S&P") views natural gas utilities that have weather-related revenue stabilization clauses as being in a stronger position among utilities within the same rating category (Exh. BSG-2, p. 11). The Company added that a WSA clause would align financial performance with the intended outcome of a rate case and reduce the chance of unexpected windfall or shortfall profits related solely to weather (id.).

The Company argued that with the implementation of the WSA, the Company's performance would correspond with investors' long-term expectations, which are formulated on the assumption of

normal weather (id. During the hearings, the Company's cost of equity witness, Mr. Moul, defined "normal weather", which he stated to be the basis of investors' expectations, to mean "normal" in a probability sense, with an average and a measure of spread or deviation from the average, rather than the 20-year average degree days (Tr. IX, pp. 109-112). Mr. Moul stated that his reason for recommending the same cost of equity, with or without the WSA, is that investors take a long-term view of the cost of equity, and that investors' expectations (based on his definition of normal weather) of the return on equity would remain at the same level, with only the amount of deviation from the average expected return on equity that could change (id.). The Company asserted that over the longer term, investors' required cost of capital for investment in a gas utility would be the same with or without a WSA clause (Exh. BSG-2, p. 11).

However, the Company's WSA witness, Mr. Ferro, defined normal weather to refer to specific degree day levels (Tr. XII, pp. 76-79). Mr. Ferro asserted that, in accordance with the Company's WSA proposal not to use a bandwidth on the test year normal degree days, it makes sense to have a WSA that "fully normalized" sales and revenues because the Company's base rates are based on fully normalized sales and revenues (id.).

B. Proposed Refund and Recovery Mechanism

To implement its proposal, the Company proposed an amendment to the existing cost of gas adjustment clause ("CGAC") to allow

the Company to adjust changes in non-gas revenues due to deviations of weather from test year normal weather (Exh. BSG-5, pp. 47-48). Specifically, the Company proposed to adjust its revenues, net of gas cost collections, and to accumulate the monthly net revenues in two seasonal deferral accounts:[12] (1 an off-peak WSA deferral account; and (2) an on-peak WSA deferral account (id., p. 48).[13] The off-peak WSA deferral account would record the May through October net revenue adjustments due to abnormal weather; the peak WSA deferral account would record the November through April net revenue adjustments due to abnormal weather (id.) Interest would be calculated based on the average monthly balance of the seasonal deferral accounts using the Bank of Boston monthly prime interest rate, and added to the WSA deferral accounts end-of-month balances (id., and Sch. BSG 5-16, p. 1).

The Company advanced several reasons for its proposed use of

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[12] The proposed deferral accounts are similar to the treatment of under- or over-collections of gas costs in the deferred gas cost accounts of the CGAC (Exh. BSG-5, p. 48).

[13] As the basis for calculating the adjustments in the net (or non-gas) revenues associated with deviations from normal weather, the Company proposed to use the same method for determining normal monthly degree days and the weather normalization of test year revenues during the Company's most recent rate case (Exh. BSG-5, Sch. BSG 5-16, p. 1). The same normal degree days determined during the Company's rate case would be used in the WSA calculations until the Company's next rate case when a new set of normal degree days would be used (id., p. 53).

seasonal deferral WSA accounts (id., p. 49).[14] First, the deferral method complements the Company's seasonal deferral under existing CGAC id. Second, under the deferral method, the revenue adjustments would counteract, to some extent, the gas cost changes in the CGAC because the Company tends to undercollect gas costs and overcollect non-gas costs when the weather is colder than normal (Exh. BSG-5).[15]

Third, the Company stated that the deferral method, as opposed to immediate adjustments, would be easier to implement and administer, and would be more easily understood and accepted by customers (id., p. 50). The Company argued that, if it were to calculate immediate monthly billing adjustments, the Company would have to rely on each customer's use per degree day estimating factor, which does not necessarily represent the customer's true sensitivity to weather. Therefore, the Company asserted that the use of immediate adjustments would be inequitable (id.) The Company added that immediate adjustments would potentially create volatile price signals and customer

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[14] The Company stated that nine of the ten companies with weather-related revenue stabilization clauses use immediate adjustments, or adjustments with a one-month lag to customers' bills (Exh. BSG-5, p. 47). Only one company (Elizabethtown Gas Company) uses an annual deferral mechanism (id.).

[15] The Company stated that the under-collection of gas costs during colder than normal weather is due to the sendout of additional higher-cost gas supplies which are not forecasted, which in turn results in overcollecting non-gas costs due to higher sales volume (Exh. BSG-5, p. 49).

confusion because it is possible that WSA adjustment for a warmer than normal month could be added to a customer's bill in a month which turns out to be colder than normal (id.

Fourth, the Company stated that recovering or refunding seasonal net revenue adjustments due to weather over an entire season reduces the possibility of significant impacts on customers' bills because the overall impact of weather tends to be mitigated by the offsetting effect that monthly weather fluctuations have on a utility company's net revenues (id., p. 51) The Company noted that in the case of monthly adjustments, changes in weather could result in monthly swings in adjustments to customer bills (id.).

The peak and off-peak WSA deferral accounts would be recovered from, or refunded to, firm ratepayers through an off-peak weather stabilization adjustment ("OWSA") factor and a peak weather stabilization adjustment ("PWSA") factor, respectively (id., Sch. BSG 5-16, p. 3). These factors are similar to the off-peak and peak gas adjustment factors ("GAFs") of the CGAC, and would be filed as part of the off-peak and peak GAFs, respectively (id., p. 54).

Like the existing CGAC, the proposed WSA would also have off-peak WSA and peak WSA reconciliation balances which would be reflected in calculating the OWSA and PWSA factors (id., pp. 48, 55). The off-peak WSA reconciliation would be filed in mid-March of each year together with the Company's filing of its

off-peak GAF; the peak WSA reconciliation would be filed in mid-September together with the Company's filing of its peak (id., p. 48).

In proposing to file the OWSA and PWSA factors with the off-peak and peak GAFs, respectively, the Company reasoned that the Company's off-peak and peak season base rates are designed to recover costs of providing services for these seasons (id., p. 55). Thus, any seasonal net revenue changes due to abnormal weather would result in the under- or over-collections of the Company's fixed costs during each season (id.

The Company proposed to implement the WSA at the same time the Company's new base rates become effective (id., p. 58). Company stated that the PWSA and OWSA factors would first be reflected in customer billings in November 1993 by incorporating the PWSA factor into the calculation of the 1992-93 peak GAF (id. The OWSA factor would first be reflected in the CGA billings in the 1993 off-peak period (id.

The Company did not incorporate in its WSA proposal a bandwidth or range of degree days, above or below the test year normal degree days, beyond which weather-related revenue adjustments would be collected (id., p. 53). The Company reasoned that its base rates are designed to fully recover test year weather-normalized sales and revenues. To be consistent with the development of these base rates and to allow the actual recovery of its fixed costs, Bay State asserted that it is more

equitable for both the Company and the ratepayers to be fully compensated for the net revenue changes due to weather (id., 53-54).

The Company would apply the WSA to all of its existing rate classes, except the residential non-heating rate classes (R-1 and R-2) since those classes are not weather sensitive. WSA factors each of the following four groups of rate classes would be calculated: (1) residential heating (R-3, R-4), (2) low annual use commercial and industrial ("C&I") (G-30), (3) high winter use C&I (G-41, G-42), and (4) low winter use C&I (G-51, G-52) (id., pp. 53-54)

The Company provided a description of its computer program for calculating each customer's use per degree day and base load (RR-DPU-7). The Company's computer program also determines the type of each customer within each rate class, including those customers that are non-heat-sensitive or with zero use per degree (id.). In response to a Department record request, the Company performed a count of the number of customers in each rate class with zero base use per degree day based on each customer's consumption history (RR-DPU-36).[16]

The Company stated that its weather normalization of test

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[16] For R-3/R-4, there are 2,756 (2 percent of total) customers who are not heat sensitive or have zero base use per degree day (RR-DPU-36, Attachment B). The corresponding numbers and percentages of total for G-30, G-41, G-42, G-51, and G-52 are, respectively, 1,333 (8 percent) 114 (3 percent), 50 (4 percent), 292 (17 percent), and 87 (22 percent) (id.)

year sendouts and sales is based on the actual gas use per degree day experienced each month by each rate class (Exh. DPU-42). The Company added that in calculating the proposed WSA revenue adjustments, the same actual use per degree day factors for each rate class would be used (id.

C. Alternative Methods to Mitigate Earnings Instability

1. CGAC Revision

In Essex County Gas Company, D.P.U. 91-107/110/111 (1991 ("Essex"), the Department granted Essex County Gas Company's ("Essex") request for exemption from the existing CGAC regulation (220 C.M.R. 6.06) and allowed Essex to reallocate a portion of base pipeline gas commodity costs from the off-peak to the peak season (the "Essex adjustment"). Id., p. 9. In that docket Essex advanced several reasons for exemption from the existing regulations. Essex's primary concern was the adverse impact of the existing CGAC regulation on its earnings stability. Id., p. 8.

In response to a Department record request, Bay State asserted that an adjustment to the existing CGAC would not provide any meaningful enhancement to the Company's earnings stability (Exh. DPU-71) In addition, the Company stated its position regarding the reasons advanced by Essex to support its request for exemption from the existing CGAC regulation.

First, the Company agrees with Essex that the Department's rate design precedent, first reflecte in the Company's rates in

Bay State Gas Company, D.P.U. 89-81 1989), increased the non-gas revenue collections in the winter period and decreased the non-gas revenue collections in the summer period (Exh. DPU-70). The Company asserted that D.P.U. 89-81 reduced its summer period test year non-gas revenues by almost $1.5 million, or 5.9 percent, and increased winter period non-gas revenues by $12 million, or 20.4 percent (id.) The Company added that the same high ratio of winter-to-summer non-gas revenue collections is maintained in the proposed rates of the instant docket (id.).[17]

Second, the Company stated that a properly designed CGAC should duplicate, as closely as possible, the allocation of costs by season achieved in an allocated cost of service study ("COSS"), which the Company asserted to be the most precise allocator of costs available (id.) Comparing the seasonal gas costs allocation based on the CGAC with the allocation based on the Company's COSS, the Company noted that the summer CGAC-base gas rate is lower than the COSS-base gas rate, and the winter CGAC-base gas rate is higher than the COSS-based gas rate (id.) The Company asserted that there is a need to revamp the existing CGAC to reflect proper gas cost collection and to lessen administrative burdens (Exh. DPU-70; Tr. XIV, pp. 34-36). The

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[17] In its initial filing, the Company provided a schedule showing the non-gas portions of the existing rates (Exh. BSG-7, Sch. BSG 7-10). The Company also provided a schedule showing the non-gas portion of the Company's proposed rates using class-specific seasonal base gas rates and seasonal Company-wide base gas rates (Exh. DPU-47).

Company calculated the Essex adjustment in Exhibit DPU-46 and concluded that because this calculation reflects proper gas cost collection less accurately than the existing CGAC, it would not be appropriate for the Company to make the Essex adjustment (id; Tr. XIV, p. 30). The Company added that the Essex adjustment would have no significant impact on the Company's earnings stability (Exh. DPU-70).[18]

Third, contrary to Essex's assertion, the Company stated that the Essex adjustment would not cause Bay State's summer period base gas rates to be less than marginal costs, noting that the difference between the Company's summer base gas rates is always at least $0.10 per therm and in some rate classes as much as $0.19 per therm higher than marginal costs (id.).

Finally, consistent with Essex's position, the Company stated that the present low tailblock non-gas rates may inhibit investments to serve customers with large loads or customers with predominantly summer loads (id. The Company added that it has addressed this concern in its rate design proposal in this case (id.)

During the proceeding, the Company acknowledged that it committed an error in calculating the Essex adjustment (Tr. XVIII, p. 11). Accordingly, the Company filed Exhibit BSG-23 as its corrected version of the "Essex adjustment." The Company, however, did not indicate whether its initially-stated position, that the Essex adjustment will not improve earnings stability, remains unchanged based on the corrected calculation of the Essex adjustment.

2. Rate Design

The Company stated that it is unaware of any practical rate design alternatives that would have any significant effect on weather-related revenue fluctuations (Exh. DPU-41). The Company noted that, in addition to the high levels of fixed pipeline demand charges that are recovered through the CGAC, gas utilities have high fixed costs that are designed to be recovered through a utility's non-gas rates (Exh. DPU-37). The Company, however, added that if it were possible to recover non-gas fixed costs through fixed demand charges on daily contract demands, or some cost-based weather insensitive measures, gas utility earnings could be less susceptible to weather fluctuations (id.)

The Company, however, stated that it is not practical to measure or monitor gas customers' daily demands because gas meters that measure daily demand are not widely used (id.) [19] The Company added that recovery of capacity-related costs through demand charges is currently impractical, at least in New England, due to the absence of customer load data and cost-effective demand meters, and because of possibly low efficiency or equity gains given customers' load homogeneity (id.).

3. Interruptible Margin Sharing and Incentive Ratemaking

The Company stated that it does not believe that interruptible profits, whether related to warmer than normal

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[19] The Company noted that its METSCAN system could eventually provide Bay State with such capability in the next five to six years (Exh. DPU-37).

weather, or annual interruptible profits, should be used for earnings stabilization (Exh. DPU-109). The Company stated that the fundamental reason that the Department first required interruptible profits to be flowed through to firm customers via the CGAC in 1982 was that interruptible profits were determined to be too unstable to be included for ratemaking purposes (id., citing Boston Gas Company, D.P.U. 1100, p. 41 (1982)).

The Company added that there is no fundamental difference today in the interruptible market that would make it any more appropriate for gas utilities to be dependent on interruptible sales margin for earnings stability (id.). The Company added that using interruptible margin for earnings stability is inappropriate because it is never possible to ensure that non-core customers would willingly purchase natural gas in sufficient quantities and at the appropriate price that would produce the margins necessary to provide earnings stability (id.).[20]

The Company stated that interruptible margin sharing as an incentive for the Company to flatten its load curve is "... incentive ratemaking at too low a level" (Tr. XIV, p. 45)

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[20] The Company asserted that it is inappropriate that the Company is required to wait until its next rate case to recover the costs of any investment necessary to serve new interruptible customers while being required to pass back to firm ratepayers margins from the new interruptible customers (Exh. DPU-109). Accordingly, the Company urged the Department to open a generic proceeding to investigate this issue, as was contemplated in Commonwealth Gas Company, D.P.U. 91-60 (1991) (Exh. DPU-73).

The Company reasoned that because of its need to keep the cost of service as low as possible, it has long identified maximizing interruptible margin as a way to meet that objective (id.).[21]

The Company stated that incentive regulation is a potentially beneficial mechanism for rewarding exemplary utility actions (Exh. DPU-109). The Company, however, added that incentive programs must be carefully examined prior to implementation to ensure that no unintended distortions are caused (id.; Tr. XIV, p. 46). The Company urged the Department to establish incentive programs for the most important and encompassing activities first and to address the need for more focused incentives at a later time, such as encouraging interruptible sales (Exh. DPU-109).

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[21] In its October 21, 1991 Creditweek issue, S&P made the following observations on those utility companies included in the barometer group that have interruptible margin-sharing arrangements. (1) Connecticut Natural Gas Corporation: "The firm also benefits from a fairly supportive regulatory climate, as evidenced by a margin-sharing mechanism on interruptible sales, which has helped negate the effects of recent warmer-than-normal heating seasons." (Exh. AG-208, p. 162); (2) Connecticut Energy Corporation: "Tempering these positives is the company's financial profile, which has weakened considerably, primarily reflecting recent warmer-than-normal heating seasons. Yet, regulators have been supportive, temporarily suspending the interruptible margin-sharing mechanism, allowing Southern Connecticut to retain some $2.7 million of annual profits through the rate year ending February 1992." (id., p. 178); (3) New Jersey Resource Corporation: "Market risk is well below average, as over 85% of sendout goes to firm residential and commercial users, and accounts for virtually all profits as a result of regulatory margin sharing formulas." (id., p. 169).

D. Positions of the Parties

1. Berkshire Gas Company

Berkshire supports Bay State's WSA proposal and claims that it corrects a major problem confronting local distribution companies ("LDCs") in Massachusetts (Berkshire Brief, p. 2). Berkshire advances several reasons in support of Bay State's WSA proposal.

First, Berkshire states that abnormal weather creates difficulties and inequities that affect both LDCs and ratepayers (id., p. 5). Second, Berkshire asserts that the existing ratemaking procedure using test year normalized revenue requirements and rates is dependent upon the occurrence of normal weather, and could therefore depart from cost-based rates (id., p. 6). Berkshire argues that, because the present Department method of defining normal year weather is based on the average weather over an extended period of twenty years, this method is slow to respond to new weather trends (id.) Berkshire argues that the existing method of using test year normalized sales and revenues penalizes LDCs during periods when there is a warming trend, by inaccurately predicting sales to be higher than what would actually occur on a more current basis (id.)

Third, Berkshire states that the existing rate design practice for LDCs in Massachusetts magnifies the effects of weather variations on revenue recovery (id., p. 7). Berkshire notes, for example, that during the shoulder months of the peak

period, Bay State's ability to recover revenues is greatly susceptible to weather variations (id., p. 8).

Berkshire, however, contends that the destabilizing financial effects of weather fluctuations are not limited to Bay State, and that Bay State's WSA proposal is not predicated on the existence of seasonal rates (Berkshire Brief, p. 8, citing Tr. III, pp. 95-96). Instead, Berkshire argues, such instability affects all LDCs regardless of their particular rate design (id.). Berkshire concurs with Bay State that rate design revisions will not satisfactorily address the difficulties confronting LDCs and their customers when abnormal weather occurs (id., p. 7).

Fourth, Berkshire states that the impacts of weather variations are much greater on LDCs than on ratepayers. Berkshire notes that during Bay State's test year, which was warmer than normal, Bay State's net income decreased by approximately 11 percent, while a WSA would have only adjusted customers' bills by 1 percent (id., p. 8). Berkshire asserts that the volatility of an LDC's sales and revenues due to weather fluctuations is far greater than the LDC's ability to adjust its costs, stating for example, that it cannot arbitrarily lay off its work force or abandon and retire its rate base when sales have decreased (id., pp. 8-9).

Fifth, Berkshire asserts that Bay State's WSA proposal, if implemented, would benefit ratepayers (Berkshire Brief, p. 9).

Berkshire argues that the WSA would likely reduce the need for frequent rate reliefs that could in turn lower the costs of the ratemaking process (id., p. 9). Berkshire also argues that the WSA would protect ratepayers from abnormally high fuel bills during periods of extremely cold weather, and mitigate fluctuations in customers' bills during periods without extreme weather variations (id.). In addition, the WSA could mitigate administrative and financing costs that LDCs incur as a result of weather variations, claiming that the ultimate beneficiaries of such cost reductions are the ratepayers (id., p. 10). Berkshire also states that the WSA would provide ratepayers with a more accurate pricing mechanism that reflects the true cost of providing service (id.).[22]

Sixth, Berkshire asserts that Bay State, through its proposed WSA, has not attempted to obtain 100 percent assurance that it will exactly recover its authorized revenues, but rather attempts only to adjust revenues due to deviations from normal weather (id., pp. 10-11). Berkshire reasons that there are many factors that affect an LDC's sales and revenue recovery, and that weather is just one of those factors (id., p. 10). Berkshire contends that the concern that a WSA might reduce an LDC's incentive to control its costs is unfounded because fluctuations

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[22] Berkshire asserts that the existing rate design provides erroneous price signals because the recovery of fixed costs of serving customers varies with weather conditions (Berkshire Brief, p. 10).

in weather are uniquely uncontrollable events affecting LDC earnings, and that it is the duty and is in the long-term interest of LDC shareholders to control costs and provide efficient service to customers (id., p. 11).

Berkshire states that, although there is no WSA mechanism currently in place, adjustments to reflect the effects of weather already exist based on existing ratemaking practices, such as the use of test year weather normalized revenues as a basis for designing rates and the application of the CGAC (id.) Because the proposed WSA would adjust customer bills for weather-related consumption changes, Berkshire states that this approach is consistent with the Department's policy in the electric sector, where the customers, not the electric utilities, bear the risks and costs associate with insufficient demand (id., pp. 12-13, citing D.P.U. 86-36-C, p. 87 (1988))

Berkshire notes that a number of state utility commissions have approved some form of weather-related adjustments that recognize the effects of weather variations on revenue recovery

citing Exhs. BSG-5, p. 46; Exh. DPU-44, Attachment F, pp. 1-2; DPU-39; BSG-2, pp. 11-12).[23] Berkshire notes, for example, that the New York Public Service Commission ("NYPSC") in reviewing recently proposed weather normalization clauses, has recognized the need for weather normalization because of

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[23] A form weather-related revenue stabilization adjustment, like Bay State's proposed WSA, has been also termed as "weather normalization clause", or "weather stabilization clause."

uncontrollable weather variations and has concluded that the benefits that flow from weather normalization exceed any of its perceived shortcomings (Berkshire Brief, citing Long Island Lighting Company, 129 PUR 4th 131, 158, November 26, 1991, hereinafter referred to as "LILCO"; Re National Fuel Gas Distribution Corporation, 95 PUR 4th 128, 135-136 (1988) [24]

Berkshire contends that Bay State's proposed WSA is "revenue neutral" or "symmetrical" in the sense that the WSA will recover or refund to customers revenues that were under- or over-collected (Berkshire Brief, p. 4). Berkshire adds that the WSA is an even-handed device designed to enhance revenue predictability for gas utilities and their customers (id.).

Berkshire supports Bay State's proposed deferral method for incorporating the seasonal WSA in the Company's GAFs and advances several potential benefits of such a method (id., pp. 4-5). More specifically, Berkshire agrees with Bay State that such a deferral method avoids a separate rate billing charge solely for

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[24] Berkshire quotes NYPSC's reason for adopting a weather normalization clause, viz.: "Weather normalization will neither guarantee a revenue level nor remove a risk so as to significantly reduce the company's incentive to contain costs. The vagaries of weather, which are beyond the company's control, are but one of the many factors which dictate the degree to which the company will exceed or fail to achieve its allowed return. We conclude that the benefits to the ratepayers in ameliorating high bills during colder than normal periods, as well as to the company in removing an influence on customers' energy expenditures that is beyond the company's control, outweigh the theoretical objections to a WNC [weather normalization clause]." (Berkshire Brief, pp. 13-14, citing LILCO at page 158).

adjustments for abnormal weather, provides limited offset to gas cost charges in the CGAC, offers administrative simplicity, provides a greater likelihood of customer understanding and acceptance, and diminishes the likelihood of significant swings in customers' bills because of offsetting monthly effects (id., p. 5).

Berkshire requests that, in the event the Department rejects Bay State's proposed WSA, it should only do so on the specific record in this case (id., p. 15). Berkshire argues that other companies should be able to propose their own weather stabilization mechanisms and make their own showing of need therefor, with the expectation that the Department will consider their proposals (id.)

2. Boston Gas Company

Boston Gas Company ("Boston Gas") urges the Department to recognize that the issues faced by Massachusetts LDCs vary from company to company, and that a weather stabilization clause that might work for one company may not be appropriate for another due to a variety of other operational factors (Comments of Boston Gas Company, p. 1). Boston Gas states that it continues to consider a weather stabilization clause, as well as other methods such as rate design, as a means of responding to the vagaries of Massachusetts weather (id., pp. 1-2).

3. The DOER

DOER opposes the implementation of Bay State's WSA at this

time (DOER Brief, p. 14 DOER argues that the proposed WSA runs counter to the notion of a competitive marketplace, adding that other businesses in Commonwealth operate without insulation from variations in operating conditions such as weather (id., p

In the event the Department approves Bay State's proposed WSA, DOER urges the Department to ensure that the weather data on which the annual reconciliation would be based is fully reviewable (id.) DOER notes that Bay State's weather consultant, Weather Services Corporation, currently obtains from the Pease Air Force Base in Portsmouth, New Hampshire and asserts that the Company was unable to indicate how it would obtain weather data and adjust to the scheduled closing next year of Pease Air Force Base (id., p. 15, citing Tr. III, p. 58).[25]

DOER asserts that the Department's current focus should be to ensure that gas companies in Massachusetts offer a full array of reasonably-priced sales and transportation services (DOER Reply Brief, p. 7). DOER asserts that such services will promote competition, maximize the availability of supplies of reasonably-priced gas to customers, attract new and expanded business, promote economic recovery in Massachusetts (id.)

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[25] DOER notes that the Company's affiliate, Northern settled its recent rate case in New Hampshire without implementation of a weather stabilization adjustment (DOER Brief, citing AG-RR-33). DOER also notes that the Rhode Island Public Utilities Commission has previously rejected weather normalization proposals of Providence Energy Company (id.).

4. The Attorney General

The Attorney General opposes the Company's proposed WSA (Attorney General Brief, p. 81). The Attorney General notes that existing Department policy allows utilities to recover their costs and to earn their cost of capital based on test year levels of costs adjusted for known and measurable changes (id., pp. 81-82). Since a significant portion of sales to customers are temperature sensitive, the Attorney General notes that the Department has for many years required the inclusion of "weather adjustment" when determining a gas utility's revenue requirements. The Attorney General asserts that the weather normalization adjustment effectively eliminates the impact of the peculiarities of test year weather conditions on the Department's revenue requirement determination. In turn, this provides a neutral allocation between ratepayers and shareholders of the risk that the upcoming rate year will either be colder or warmer than normal (id., pp. 82-83).

The Attorney General notes that the proposed WSA represents a significant departure from the Department's aforedescribed policy for reflecting the impact of weather conditions in gas rates (id., p. 83). The Attorney General advances several arguments in opposing the proposed WSA: (1) the Company's proposal is one-sided because it would largely eliminate all of the risks in the gas distribution business, yet the proposal does not provide for a commensurate reduction in the allowed rate of

return; (2) the Company has not demonstrated the reliability of the weather proxy data used in its weather stabilization adjustment; (3) the adoption of the WSA would result in distorted and incorrect price signals contradicting the Department's stated policy goals; and (4) the adoption of any weather stabilization would result in complicated rate structures that would engender customer confusion and resentment (id., pp. 81-88). These reasons are discussed below

Regarding the first reason, the Attorney General states that, if the WSA were implemented, it would put the Company in an enviable position of having a legally enforceable monopoly with governmentally sanctioned rates that places all the risks associated with weather on its ratepayers (id., pp. 84-85). The Attorney General asserts that this is a radical departure from the current situation where stockholders and ratepayers bear those risks equally (id., p. 85). The Attorney General notes that the Company did not include an appropriate adjustment to its proposed cost of equity to reflect the proposed reduction in risk (id. The Attorney General adds that, while the Company's financial witness agrees that investors' required returns vary directly with the perceived risk posed by an investment in a company's stock, and that S&P's Creditweek states that a utility with a weather normalization mechanism is a better risk than one without such mechanism, the Company has done nothing to assist the Department in determining the magnitude of the appropriate

cost of equity adjustment that should be made in the event that the proposed WSA is approved (id., p. 85, citing Tr. IX, p. 14, Exh. DPU-34). The Attorney General contends that this failure alone requires either that the Department reject the Company's proposal out of hand, or that the Department reduce the Company's allowed rate of return on equity to an appropriate risk-free rate (id., p. 85).

Regarding its assertion that the Company has not demonstrated the reliability of its weather proxy data, the Attorney General asserts that the temperature and wind speed data that the Company proposed to use in its WSA are not the actual data for the service territories (Attorney General Brief, p. 85). The Attorney General notes that the Company relies on the average temperature and wind speed data from Portsmouth, New Hampshire and Bedford, Massachusetts to determine proxy weather data for the Company's Lawrence division (id., pp. 85-86). Similarly, average data from Providence Rhode Island and Bedford, Massachusetts were used for the Brockton Division, and data from Bradley Field, Connecticut was used for the Springfield Division (id.). The Attorney General asserts that the Company has not done any studies to determine if the temperatures within each service division correlate with the proxy temperatures (id.) The Attorney General also asserts that the Company has no standard procedure for auditing weather information received and completely relies on Weather Services, Inc. (id.).

The Attorney General states that Weather Services, places several limitations on the weather data it collects, such as placing a cap of 68 degrees for any actual temperature above 68 degrees (id.) Noting the Company's assertion that without the 68-degree cap it would be meaningless because of a weak correlation in degree days and sendout, the Attorney General asserts that the Company has not performed any analysis to show that in fact there is correlation between sendout and temperature (id, p. 87). Accordingly, the Attorney General concludes that even if the Department were inclined to allow the Company to implement the WSA, no sufficiently reliable data is available to effectuate the WSA proposal (id.).

The Attorney General contends that the result of any weather stabilization adjustment would be to send the wrong price signal to consumers (id., p. 87). The Attorney General adds that the proposed WSA, if implemented, would undo all the work the Department has done in recent years to ensure that approved rates are generally cost-based and provide customers the correct consumption incentives relative to cost incurrence (id. The Attorney General contends that since the Company has provided no compelling rationale for the alleged distortion in prices, the Department should reject the Company's proposal to eliminate the claimed distortion through the proposed WSA (id., pp. 87-88).

Finally, the Attorney General contends that adoption of the WSA would result in a more complicated rate structure and would

engender consumer confusion and resentment (id., p. 88). The Attorney General notes that, as proposed, the WSA would use different WSA factors for each rate class (id.). The Attorney General states that while complexity and potential consumer confusion may not be sufficient reasons for the Department to reject the WSA, pricing and other considerations would dictate its rejection (id.). The Attorney General adds that rate simplicity, and consumer understanding, satisfaction and trust, when added to the other considerations that militate against the adoption of the WSA, should compel the Department to reject the Company's proposed WSA (id.)

In response to the Company's initial brief, the Attorney General addresses the Company's assertion regarding increasing competitive nature of the gas industry and the many business risks facing LDCs (Attorney General Reply Brief, p. 33). The Attorney General asserts that the major unregulated competitor for LDCs is the home heating oil business, which operates in an unregulated market and whose earnings are affected by changes in the weather (id.) The Attorney General argues that because it is the responsibility of the Department to create "competitive type pricing," removing the risk associated with weather does not further this goal (id.)

Regarding the Company's assertion that no reduction on return on equity is necessary because investors have factored the implications of weather stabilization in their stock evaluations,

the Attorney General contends that this assertion cannot be applied to investors' decisions regarding Massachusetts' gas distribution companies (id., p. 34). The Attorney General reasons that, in Massachusetts, investors have not contemplated approval of the WSA, and since the Company bases its assertion on historical data, investors could have not taken into account the WSA (id.).

5. The Company

The Company disagrees with the Attorney General's assertion that the proposed WSA eliminates the only significant business risk faced by the Company (Company Brief, p. 136). The Company maintains that LDCs are facing an increasingly competitive natural gas industry in the wake of FERC Orders 436 and 636 which result in the unbundling of pipeline services, capacity reassignment, and open access transportation (id., p. 137). The Company claims that as a result of these changes, Bay State would have to arrange for all gas purchases directly with producers and will no longer be able to rely on interstate pipeline as gas merchants (id.) In addition, the Company claims that it also faces the risk of by-pass of its distribution system and continues to compete with the unregulated alternative fuel suppliers (id.). Accordingly, the Company concludes that the Attorney General's suggestion of a risk-free utility monopoly does not exist (id.).

The Company claims that the Attorney General

mischaracterizes the proposed WSA as one-sided and ignores the even-handed nature of Bay State's proposal, which will both recover from and refund to customers under- and over-collections, respectively, as a result of abnormal weather (id.). The Company maintains that ratepayers and shareholders will continue to bear risks of abnormal weather equally under the WSA (id.).

Regarding the Attorney General's proposal to reduce the Company's cost of equity to reflect the reduction in risk due to the Company asserts that the theory underlying the assertion is fallacious (id., pp. 137-138). The Company asserts that a reduction in return on equity is unnecessary because investors expectations are based on normal weather and under the WSA, Bay State's performance would merely correspond to such expectations (id.). In support of this assertion, the Company cites a NYPSC decision stating that:

> ... [E]ven if the WNC did reduce NFG's risk, and hence its equity cost by 25 basis points, investors are now aware of the WNC and would surely have factored its implication into their stock evaluations, so that the equity cost as measured by the market today should already be 25 basis points lower than it otherwise would have been.

Id., p. 138, citing National Fuel Gas Distribution Corporation, Case 88-G-180, Opinion No. 89-22 (New York Public Service Commission, 1989).

The Company states that, even if there were an impact on the return on equity from the adoption of the WSA, there is no basis by which to accurately translate the risk effects of the WSA on

the rate of return on equity and to measure an appropriate reduction (id. The Company notes that the Attorney General's suggestion to reduce the Company's return on equity to the current 90-day U.S. Treasury bill rate is startling because that rate currently ranges from 3.19 to 3.20 percent (id. The Company asserts that under its CAPM analysis, the suggested level of return on equity would imply that Bay State's beta would be zero, adding that such a result is not possible because beta is a measure of systematic or non-diversifiable risk (id., p. 139).

The Company maintains that its proposed WSA is based on sound meteorological effective degree-day data obtained from its consultant Weather Service Corporation ("WSC"), representing a group of meteorological experts that provide similar service to several gas companies in Massachusetts (id.). The Company states that before 1984 Bay State relied upon the temperature degree days provided by the National Oceanic and Atmospheric Administration ("NOAA"), but in 1984 started to use WSC's data because the Company determined that those data were more reliable and timely (id., pp. 139-140).

Regarding the Attorney General's criticisms on the Company's weather data used for its WSA, the Company notes that there are no airports or approved weather stations in or near Lawrence or Brockton and asserts that the averages of data from Bedford, Portsmouth, and Providence provide reliable proxies for the Lawrence and Brockton divisions as indicated by the record in the

instant case (id., p. 140). The Company further asserts that Bradley Field weather station is only fifteen miles from Springfield and provides accurate effective degree day data for the Springfield division (id.). The Company adds that Bay State many years has relied on WSC data to develop correlations between base load and heating measurements for the Company's service divisions (id., pp. 140-141). The Company concludes that the Attorney General's challenges to the use of WSC's proxy data should be disregarded (id., p. 141)

The Company rebuts the assertions of the Attorney General and DOER that the WSA unfairly operates against ratepayers by eliminating risk from weather without a corresponding reduction in rate of return (Company Reply Brief, p. 43). The Company asserts that it has demonstrated that the WSA operates evenhandedly by crediting customers during colder than normal weather in exchange for revenue stability during warmer than normal weather (id.).

The Company contends that the Attorney General, in criticizing Bay State's and Berkshire's view that the WSA provides a more accurate and correct price signal, misinterpreted reasons why the deferral method is preferable to the monthly adjustments (id., pp. 43-44).

The Company reasserts that the gas industry faces increasing risks from competition and criticizes the Attorney General's assertion that weather is the only risk facing LDCs (id. Th

Company disagrees with the Attorney General's comparison of Bay State with the home heating oil business. The Company reasons that unlike public utilities, these home heating oil firms are free to charge exorbitant prices during colder periods to offset their losses from warm weather (id., pp. 44-45). The Company adds that as a regulated utility, its rates are set by the Department to recover its cost of service, and therefore, a weather stabilization mechanism is necessary to minimize earning fluctuations caused by abnormal weather (id.)

The Company claims that the Attorney General misses point of the Company's assertion that no reduction in return on equity is necessary to reflect the implementation of the (id., p. 45). The Company argues that Bay State's rates designed using normalized test year sales levels based on the assumption that normal weather would occur, and that the WSA helps to reflect normal weather conditions between base rate cases (id.). The Company adds that in a similar way, investors' long-term expectations are formulated on the basis of normal weather (id.). Noting that investors expectations are that the weather would be normal in the long-run, the Company concludes that investors' required cost of capital for an LDC would be the same either with or without a WSA (id.)

The Company claims that the Attorney General missed the point when it claimed that Massachusetts investors could not have taken the WSA into consideration since it had not bee proposed

in this proceeding (id., pp. 45-46). The Company, argues that since rational investors formulate their long-term expectations on the basis of normal weather, those investors have already included the effect of the WSA in their investment expectations and required rate of return (id., p. 46). The Company claims

> the WSA would merely align the Company's future performance these long-term expectations (id.).

E. Analysis and Findings

As the basis for its proposed WSA, the Company cites the problem of earnings instability. The Department acknowledged this problem in Essex, where we noted that:

> ... the CGAC's failure to reflect seasonal differences in the pipeline gas commodity costs has resulted in the problem of earnings instability.... With the advent of seasonally differentiated tariffs from gas pipeline suppliers, a reallocation of a portion of base pipeline commodity costs from the off-peak season to the peak season is clearly justified. This treatment reflects more accurately current natural gas market conditions, which have changed substantially from the market conditions four years ago when the seasonal CGAC was developed....

D.P.U. 91-107/110/111, pp. 8-9.

In determining whether the WSA proposed by Bay State is an appropriate policy response to the problem of earnings instability, the Department must consider whether its existing ratemaking policies contribute to earnings instability, and if they do, whether a modification of such policies could mitigate earnings instability. In addition, we need to consider the implications on the proposed WSA of the changes in the natural

gas industry, which would tend to increase the application of competitive market forces in the allocation of energy resources Further, to approve the Company's WSA proposal, we must also determine whether (1 the resulting rates would be just and reasonable, and (2) whether the potential benefits and risks associated with the implementation of such a WSA proposal would be equitably shared between ratepayers and shareholders.

The record in this case shows that modification of existing Department CGAC regulations, rate design, and treatment of interruptible margins are three ratemaking policies which may require a review in attempting to help alleviate earnings instability.

Regarding modification of the existing CGAC regulations, as a response to the problem of earnings instability, in Essex County Gas Company, D.P.U. 91-107/110/111 (1991), the Department approved a request by Essex for an exemption from the existing CGAC regulations (220 C.M.R. 6.06) in order to improve the company's earnings stability.

Although the Company has asserted that the Essex adjustment will not help improve Bay State's earnings stability, such an assertion was based on an incorrect interpretation and calculation of the Essex adjustment. The record in this case is not clear whether the Company's assertion remains accurate if, in fact, it were based on a correct interpretation of the Essex adjustment and a revised calculati as shown in Exhibit BSG-23.

The Department notes that the Company has suggested a review of the existing CGAC regulations with the objectives of separating the gas cost from the other non-gas cost adjustments, and simplifying the administration of the CGAC. The Department has recognized the limitations of the existing CGAC regulations in Essex. However, since the Company's proposed WSA introduces non-gas class-specific WSA factors for each of the four proposed groups of rate classes, the Department is concerned that the Company's proposal may counter our objectives in reviewing the existing CGAC.

Regarding rate design, as a potential solution to the problem of earnings instability, the record shows that a primary reason for the Company's proposed WSA is that the existing rates approved in D.P.U. 89-81 increased the non-gas revenues to be recovered in the peak season, and correspondingly reduced the non-gas revenues to be recovered in the off-peak season. The Department agrees with the Company's assertion that this rate design further exposed non-gas revenue recovery to the vagaries of weather changes.

The Department recognizes that the most accurate allocation of gas costs (demand and commodity) between the peak and off-peak season is the allocation achieved under the Company's allocated cost of service study. The record indicates that the Company's proportional responsibility allocation method for capacity-related gas costs allocates a portion of these costs to

the summer season. Conversely, the Company's marginal cost study does not allocate capacity-related costs to the summer season

The two ratemaking approaches, used in the Company's allocated cost of service study and marginal cost study, provide results that would tend to make test year summer embedded gas costs (demand and commodity) higher than summer marginal costs, and test year winter embedded gas costs lower than winter marginal costs, especially for heat-sensitive customers. Since the non-gas rate is equal to the total rate (tailblock or headblock) minus the base gas rate, a summer total rate set at marginal cost, given a relatively larger summer base gas rate, would result in a relatively smaller (or negative) summer non-gas rate. On the other hand, a winter total rate set at marginal cost, given a relatively smaller winter base gas rate, would result in a relatively larger winter non-gas rate, consistent with the Company's observation.

In recent electric company rate cases, the Department has found that the appropriate allocation method for production capacity-related costs should consider both customer usage and a utility's supply planning and investment decisions Massachusetts Electric Company, D.P.U. 92-78, pp. 136-147 (1992) ("MECo"); Western Massachusetts Electric Company, D.P.U. 91-290, p. 24 (1992) ("WMECo"). This allocation method requires the allocation of capacity-related costs only to periods when customer demand mpose capacity cost incurrence.

Under the production capacity-related cost allocation method found appropriate in MECo and WMECo, supra, the allocation of capacity-related gas costs to the summer period would decrease, and the allocation of capacity-related gas costs to the winter period would correspondingly increase, especially for heat sensitive customers. Therefore, under the capacity allocation method approved in those cases, relatively fewer non-gas costs will be recovered during the winter period, reversing the impact of the existing rate design of Bay State. More specifically, since the non-gas rate is equal to the total rate minus the base gas rate, a summer total rate set at marginal cost, given a relatively smaller summer base gas rate, would result in a relatively larger non-gas rate in the summer period. On the other hand, a winter total rate set at marginal cost, given a relatively larger winter base gas rate, would result in a relatively smaller non-gas rate in the winter period.

Although the Department has approved the Company's refined proportional responsibility allocation method for capacity-related gas costs in this case, the Department may review this allocation method in future gas utility rate cases to insure consistency between the natural gas and electric sectors.

The Department believes that earnings stability might be improved through modification of the existing rate design and gas cost allocation methods, because a relatively lesser amount of non-gas revenues would be recovered during the winter period,

reducing the overall potential impact of weather changes on non-gas revenues.[26]

In addition, because a warming trend is not recognized in the present definition of test year normal degree days, high earnings during the cold years may not offset poor earnings during the warm years. Therefore, a revised definition of test year normal degree days, that incorporates such a warming trend, may result in offsetting net revenue impacts of colder- and warmer-than normal weather.

Turning to existing Department policy on interruptible margin flowthrough to firm ratepayers, the record shows that utilities in other jurisdictions with some form of interruptible margin sharing arrangements have been able to improve earnings stability, especially during periods of warmer-than-normal weather. The record further shows that the financial community tends to provide favorable credit ratings to those companies with some form of interruptible margin sharing.

The Department disagrees with the Company that there is no fundamental difference in the interruptible market today, as compared to ten years ago, that would enable the use of margins from interruptible services as a means of improving earnings stability. We disagree for the following reasons. First, the

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[26] The Department notes, for example, that while Boston Gas Company continued to evaluate a weather stabilization mechanism as a means of reducing earnings instability, Boston Gas Company also considers rate design to represent a possible alternate approach.

existing ratemaking policy no longer includes interruptible revenues as part of test year normalized revenues. Therefore, any interruptible margin sharing arrangement that might established would be over and above test year normalized revenues. Second, the changes in the natural gas industry brought about by the implementation of FERC Orders 436 and 636, provide open access transportation and third-party gas purchased in the spot market. These changes could provide new gas supply opportunities for LDCs and allow LDCs to compete in the interruptible and non-core market. Therefore, interruptible sales and transportation services could further improve efficiency in a company's use of its existing facilities.[27] Accordingly, the Department encourages the Company to explore an appropriate interruptible margin sharing arrangement that could mitigate earnings instability and allow the Company to respond to opportunities in a changing natural gas industry

The Department notes that the changes in the natural gas industry would tend to increase the application of competitive market forces in energy resource allocation. If one accepts the traditional view that regulation serves as a surrogate for market forces in the context of a market served by a monopoly provider, then the existence of a high degree of competition affects the

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[27] During the 1987-1991 period, the Company's interruptible margins reached their highest level in 1990, when the weather was observed to be warmest in all of the Company's three service areas (Exhs. DPU-53; DPU-54).

need for, and the administration of, regulation. New England Telephone and Telegraph Company, D.P.U. 1731, p. 18 (1985).

The Massachusetts natural gas market is not and may never be characterized as a market with high degree of competition However, under changing market conditions, the Department has previously considered and will continue to consider modifications to the existing regulatory framework in order to use market forces to assure that rates are fair and reasonable. Id., p. 33; Gas Transportation, D.P.U. 85-178, p. 10 (1987).

The Company's proposed WSA represents a movement towards cost-based regulation, and away from market-based regulation. In view of the changes in the natural gas market, the Department is concerned about how the proposed WSA would fit into a regulatory approach that considers modifications to the existing regulations in response to changes in an increasingly competitive natural gas market.

The Department is also concerned about whether the design of the Company's proposed WSA would result in rates that were just and reasonable. The record indicates that the Company's proposed WSA is designed primarily for heat-sensitive customers. However, a significant proportion of customers in some rate classes are not heat-sensitive, i.e., customers with zero use per degree day, based on their most recent consumption history. For example, while the Company has excluded non-heating residential customers from the proposed WSA factor billings, the Company has included

in such billings low-use high-load-factor customers, who could be non-heat-sensitive.[28] Accordingly, the Department is concerned that this approach would result in an unfair intra-class subsidization, and consequently, customer-relation problems.

In addition, under the existing Department policy for test year weather normalization of sales and revenues, Bay State's normal effective degree days are subject to review during the Company's base rate proceeding. The Company's proposed WSA would require actual daily degree day data for each of the Company's service areas, which would be used to determine the degree day deviations from test-year-defined daily normal degree days. The difference would then be used to determine the monthly deferral accounts.

The proposed method for calculating the WSA deferral accounts would require the establishment of a verifiable procedure for regular review of actual weather data between test year proceedings. The Department finds that the Company has failed to provide such a verifiable procedure for reviewing weather data to be used in the calculations of the WSA net revenue adjustments

The Department also has concerns about the allocation of benefits and risks associated with the proposed WSA. Department notes that the Company's WSA proposal would allow the

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[28] These customers are presently combined with the G-30 rate class, which the Company has proposed to be included in the WSA factor billings.

flowthrough of both gas and non-gas cost adjustments via the CGAC. Although the proposed WSA would not guarantee the Company full recovery of test year non-gas costs, the Department agrees with the Company that the WSA would improve the Company's earnings stability

The Department is unable to conclude that investors' long-term expectations on the average return to their equity investments in Bay State, based on normal weather defined in a probability sense, would remain unchanged after the implementation of the proposed WSA. The record in this case shows that the financial community tends to view those utilities that have some form of weather-related revenue stabilization clause as less risky than those utilities that do not have such a weather stabilization clause.

Therefore, even if we agree with the Company's assertion that investors' average expected return would remain unchanged after implementation of the proposed WSA, the Company's resulting less risky profile would indicate that the expected deviation from the average return on equity investments would be reduced The Department finds that this reduction in the deviation from the average expected return on equity investment is consistent with Bay State's expected improvement in earnings stability as a result of the implementation of the proposed WSA. Accordingly, the Department finds that any reduction in risk on equity investments in Bay State s uld be shared commensurately with Bay

State's ratepayers through a reduction in the rate of return on equity

The evidence presented in this case has not convinced the Department that the Company's WSA proposal is in the ratepayers' interest and therefore rejects it. In denying the Company's proposal, we do not intend to discourage gas companies from proposing an appropriate form of weather-related revenue stabilization in the future that better balances the interests of ratepayers and the Company.

While the Department recognizes that there would probably be no practical way to eliminate non-gas revenue fluctuations because of abnormal weather, we believe that there are a number of policy alternatives presently available, and others which could be available in the future. A proper combination of these alternatives could reduce the impact of the vagaries of weather changes on earnings stability.

The Department recognizes that such a weather stabilization mechanism could benefit both shareholders and ratepayers, in the same manner that the financial community recognizes such benefits. Accordingly, the Department would consider weather-related revenue stabilization proposals in combination with or separate from other policy alternatives, consistent with the guidelines and concerns articulated above.